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ABSTRACT

In Hong Kong there has been a move toward greater self-management in schools. The government has supported the School Management Initiatives scheme and has stated that the management system calls for teacher appraisal as one of its internal quality assurance mechanisms. This study examined the relationship between dimensions of school climate and the effectiveness of appraisal as perceived by teachers. Data were collected through a questionnaire completed by 337 teachers who had recently experienced teacher appraisal. Their responses were analyzed by principal components analysis. The internal reliability of the outcomes of appraisal and the subscales of the instrument used to assess organizational climate was assessed, and correlation and multiple regression analyses were used to establish the relationships between the outcomes of appraisal and dimensions of school climate. Results support the importance of an open school climate in which principals are supportive and not directive, and teachers are engaged and not frustrated in determining the effectiveness of appraisal. The study also found that principals' behaviors were the most important predictors for the effectiveness of appraisal in that they set an atmosphere that fosters teachers' professional growth. (Contains 6 tables and 43 references.) (SLD)

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Introduction

Ever since there has been teaching, teachers have been appraised (Shinkfield and Stufflebeam, 1995) and teacher appraisal is as old as the education profession itself (Rebore, 1991). However, very few schools have attempted any formal processes to evaluate their teachers (Shinkfield and Stufflebeam, 1995). In the United States, serious consideration of formal teacher appraisal began only in the 1970s and the movements to implement various appraisal schemes were catalyzed by the publication of *A Nation at Risk* in 1983 (National Commission on Excellence in Education, 1983). Large scale school reform or restructuring began in the 1980s and matters like school goals, governance, finance, curriculum and student assessment have all received attention, aiming to provide quality education to the students. However, as noted by Duke (1995), teachers and the quality of their instruction have received more scrutiny than any other areas.

As a consequence of recent emphases on individual accountability, performance, effectiveness and organizational productivity, performance appraisal of personnel has become an essential process in contemporary organizations (Castetter, 1992). In the education sector, effective evaluation of educational personnel has been found to be increasingly important in improving schools (Lane, 1990) and in forming part of a self-managing school's self-review process (McConnell, 1995).

Background to the study

Teacher Appraisal in Hong Kong Schools before 1991

Hong Kong has been greatly influenced by the British system of education, and supervision and appraisal of school teachers have long been the responsibility of the Advisory Inspectorate

Division of the Education Department. The Inspectorate carries out inspections and visits to schools, the major purposes of which are to monitor and improve the quality of teaching (Education Department, 1992). Because of the large number of schools and teachers, full inspection cannot be carried out frequently and regularly. According to the Education Commission's report (1994), between 1988 and 1993, the average inspection frequency for each of the subjects offered in secondary schools ranged from once in two years to about once in fifteen years. During an inspection visit, the inspector observes lessons, inspects samples of marked student work and interviews the subject panel chairperson. After classroom observation, the inspector provides oral feedback to the teacher on matters related to teaching skills and classroom management. However, the school does not receive any formal, written report about the performance of the teachers being inspected. Because inspectors are not members of the school, they cannot provide follow-up supervision or organize staff development programs based on the suggestions given to the teachers. On the other hand, the school does not have any information about teachers' needs and deficiencies to plan staff development activities for them. It can be seen that apart from serving mainly accountability purposes, both the school and the teachers benefit little from such occasional inspections. Apart from these visits, teacher appraisal has not been commonly practiced in Hong Kong schools as the Education Department does not require them to have any formal procedures for evaluating the performance of their teachers. Teacher appraisal was virtually unknown to teachers and administrators until it was formally proposed in the educational reform package, the School Management Initiative, in 1991.

Consequences of the Educational Reforms in Hong Kong

There have been numerous educational reforms in the western world (Beare and Boyd, 1993; Gamage, 1996), the purpose of which is to improve the outcomes of students through effective teaching and learning so that their countries can be more competitive (Caldwell and Hayward, 1998). Hong Kong has also shown a strong commitment to improve its school system (Cheng and Cheung, 1997). It began as a result of a series of reports commissioned by overseas and local educational experts (Cheng, 1992). They made suggestions to improve the teaching and learning facilities (Education Commission, 1984), provide more training for teachers (Education Commission, 1986), and more resources for special education and introduce attainment targets and related assessment (Education Commission, 1990). As noted by Cheng (1992), such efforts

were largely confined to the provision of more resources and were not enough for successful school improvement. The Education and Manpower Branch and Education Department (1991, p. 1) has also pointed out that "…. the success of individual quality improvement measures will be limited if schools are not able to draw effectively on the skills, energy and commitment of every member of the school community". In order for school improvement to occur, an effective school system is necessary (Li, 1992).

The School Management Initiative

Based on the findings of effective schools research and responding to the worldwide school-based management movement, the Education and Manpower Branch and the Education Department jointly published a report in March 1991 called *The School Management Initiative: Setting the Framework for Quality in Hong Kong Schools*. The report proposed a model of self-managing schools, like the one described by Caldwell and Spinks (1988), in which schools were to be given greater flexibility in financial and personnel management. In the report, it was pointed out that it is necessary to have formal procedures for evaluating the performance of teachers so that management decisions can be made based on staff strengths and weaknesses, and schools may not be accused of unfairness in staff promotion. To most people's disappointment, only 21 out of the approximately 400 secondary schools joined the first phase of the School Management Initiatives (SMI) scheme in 1991. The number increased as the government has changed its strategy by integrating the suggestions in the SMI with other school reforms. For example, in the Education Commission's 1994 report, *Quality in School Education*, the government continued to support the SMI and stated that the new management system supported the quality assurance approach and regarded teacher appraisal as one of the internal quality assurance mechanisms. The Education Commission has outlined a quality assurance framework in its Report No. 7, *Quality School Education*, and has recommended all schools to implement teacher appraisal before 1998, two years before they were required to have put in place the school-based management. With more and more schools adopting the SMI, teacher appraisal is becoming more and more popular in Hong Kong schools.

Purposes of Teacher Appraisal

Millman (1981) and Wise, Darling-Hammond, McLaughlin, and Bernstein (1985) have noted that teacher appraisal systems can be classified as formative or summative, each serving its own purposes. Andrews and Barnes (1990) considered formative appraisal as process evaluation and summative appraisal as product evaluation. Process evaluation provides information for teachers so that they can make adjustments during the appraisal period. With product evaluation, a value is placed on the performance of teachers and that value can be used in making decisions about contract renewal, assignment to a rung on a career ladder or an award of incentive pay. For Stiggins (1986), the purpose of formative appraisal is to provide information on teachers' strengths and weaknesses in order to plan for remedial training, thus, promoting their professional development, and therefore he has argued that formative systems are the best for teachers and schools.

School Climate and Appraisal

Teacher appraisal in Hong Kong SMI secondary schools was recognized as an organization process consisting of different stages: setting up appraisal criteria, carrying out appraisal procedures to collect data from various sources, communicating the appraisal results and taking part in the followed-up professional development activities. The appraisal also involves interactions between appraisers and appraisees (Mo, Conners, and McCormick, 1998). It takes place in an organizational setting and will certainly be affected by organizational aspects of schools such as the school climate. Peterson (1995) has also pointed out that even if the most technically excellent teacher appraisal system is installed in a school, it will not work well if the sociological dynamics such as the relationships between teachers and principals, and between teachers and their colleagues are not handled well. Moreover, these relationships can also shape appraisal practices.

People often sense that there are differences in the atmosphere of organizations and these differences often affect how members of the organization behave (Miskel and Ogawa, 1988). Social and behavioral scientists have developed the concept of climate to describe the internal characteristics of organizations. Gilmer (1966) regarded the characteristics that distinguish one

organization from another and that influence the behavior of the people in the organization as the organizational climate. In an educational setting, Hoy and Miskel (1996) described school climate as teachers' collective perceptions of the general work environment of the school that will affect their behavior.

However, school climate is a complex concept with no standard definition (Hoy, Tarter, and Bliss, 1990; Kottkamp, Mulhern, and Hoy, 1987). Its definition differs, according to differences in the variables identified as important, methods of measuring these variables and units of measurement (Pallas, 1988). Halpin and Croft (1963) developed the most widely known conceptualization and measurement of organizational climate of schools during their study of the characteristics of principal and teacher behavior in schools. They identified six basic types of climate in schools that range from open to closed. Based on Halpin and Croft's conception of school climate, Kottkamp, Mulhern, and Hoy (1987) developed the Organizational Climate Description Questionnaire - Rutgers Secondary (OCDQ-RS) for measuring the aspects of organizational climate in secondary schools.

According to Kottkamp, Mulhern, and Hoy (1987), principals can be supportive or directive. *Supportive principals* motivate teachers by using constructive criticism and they themselves set examples through working hard. The principal is also helpful and concerned with the personal and professional welfare of the teachers. On the contrary, *directive principals* are rigid and domineering when supervising teachers. They maintain close and constant control over all teachers and school activities down to the smallest details.

Also, teachers can be *engaged* when they are proud of their schools, enjoy working with each other and are committed to the success of their students. They trust students and are friendly to them and are optimistic about their ability to succeed. However, teachers can be *frustrated* when routine duties, administrative paperwork and nonteaching duties are excessive and when there are annoyances and interruptions from other teachers. Outside the workplace, teachers are *intimate* when they have a strong and cohesive network of social relationship. They know each other well and are close personal friends (Kottamp, Mulhern, and Hoy, 1987).

Kottkamp, Mulhern, and Hoy (1987) have described schools characterized by supportive

principal behavior and engaged teacher behavior as having an open school climate. They have also pointed out that a school will be more open if principals are less directive and teachers are less frustrated.

As the head of the school, the principal plays an important role in determining the working conditions of the school. Supportive principals care for the professional development of their teachers (Kottkamp, Mulhern, and Hoy, 1987) and would view appraisal as a formative process to help teachers grow professionally. Supportive principals also set examples by working hard – this certainly would influence and motivate teachers to advance their teaching technique. It is therefore postulated that teachers will show improvement after being appraised if their principals are supportive.

On the other hand, the directive principal checks teachers' activities and monitor them closely (Kottkamp, Mulhern, and Hoy, 1987). They would view appraisal as a tool for controlling teachers. Teachers may develop a negative attitude towards appraisal and may defend rather than accept the suggestions from the appraiser. They only try to satisfy the minimal requirements of the school and will not take part in any professional development activities. This leads to the postulate that teachers will not benefit from appraisal if their principals are directive.

As pointed out by Johnson (1990), teachers need to work with each other. If teachers help and support, and respect the personal competence of each other, as in a school with engaged teachers (Kottkamp, Mulhern, and Hoy, 1987), they not only learn from the appraiser but from other colleagues through working collaboratively in the same organizational setting. On the other hand, if teachers are working in an environment where they are burdened with routine duties that interfere with their teaching, they are likely to be frustrated (Kottkamp, Mulhern, and Hoy, 1987) and not find time, or be motivated to take part in staff development. It is, therefore, postulated that teachers will grow professionally if they work in an engaged climate but not in a frustrated environment.

Purpose of Study

In places like the United Kingdom, teacher appraisal was tried in various pilot schemes

before being implemented nationally (McMahon, 1995; Mortimore and Mortimore, 1991; Poster and Poster, 1993). However, formal teacher appraisal was introduced to Hong Kong SMI schools without prior evaluation of its effectiveness. As teacher appraisal takes place in an organizational setting, it is important to study the organizational aspect of teacher appraisal. The purpose of the study is to examine the relationships between dimensions of school climate and the effectiveness of appraisal as perceived by teachers. The results of the study may assist improvement of current practices and provide guidelines for schools wishing to introduce teacher appraisal.

Method

The Study

A questionnaire survey was conducted to study the relationships between the effectiveness of teacher appraisal and the organizational environment of teachers' workplaces–school climate. A pilot study was carried out to explore the factor structure of the questionnaire items and assess the internal consistency reliability of the instruments. An item was excluded if it did not load on a factor or its inclusion decreased its reliability. The questionnaire used in the main study was written in Chinese because some teachers who participated in the pilot study indicated that they were not very used to questionnaires written in English.

Subjects

Data were collected from teachers who had recently experienced teacher appraisal. There were only 34 secondary schools which had joined the first and second phase of the SMI scheme. Four schools participated in the pilot study and fifteen schools participated in the main study. Each participating school was provided with 40 questionnaires for distribution to teachers who had completed an appraisal cycle. For the main study, 360 questionnaires were returned, representing a return rate of approximately 60%. This return rate is quite reasonable as newly employed teachers may not have gone through a complete appraisal cycle at the time of the survey, and were not eligible to respond to the questionnaires. Twenty-three questionnaires were excluded because they were incomplete, leaving 337 for analysis.

The Measures

The effectiveness of teacher appraisal and the organizational climate of schools were measured by teachers' response to the questionnaires.

Effectiveness of Appraisal

In this study, an appraisal was considered effective if teachers showed improvement after being appraised. Teachers' perceptions of the outcomes of appraisal were taken as a measure of the effectiveness of appraisal. Respondents were asked to indicate on a five-point scale from strongly disagree (1) to strongly agree (5), the extent to which they agreed with 11 statements describing the outcomes of their last appraisal. The items were listed in Table 1.

Insert Table 1 about here

School Climate

The organizational climate of the schools in which the teachers are teaching was assessed by the OCDQ-RS (Hoy, Tarter, and Kottkamp, 1991; Kottkamp, Mulhern, and Hoy, 1987). The OCDQ-RS consists of 34 items and respondents were asked to indicate the extent to which each statement characterizes their school along a four-point scale from rarely occurs (1) to very frequently occurs (4).

Statistical Procedures and Unit of Analysis

Teachers' responses were analyzed in three stages. First, principal component analysis was performed on items of the OCDQ-RS to extract the factors underlying the items. Second, the coefficient alphas were computed to assess the internal consistency reliability of the outcomes of appraisal and the subscales of OCDQ-RS as revealed by the factor analysis. In the last stage,

correlation and multiple regression analyses were used to establish the relationships between the outcomes of appraisal and various dimensions of the school climate.

School climate is generally conceived as an organizational variable (Hoy, Tarter, and Kottkamp, 1991; Sirotnik, 1980), and as such is measured by aggregating individual teachers' perceptions of their schools. However, the primary concern of the present study is with the outcomes of appraisal of individual teachers, therefore, their individual perceptions of school climate were used as the unit of analysis.

Results and Discussion

Background Characteristics of Teachers

Subjects who took part in the study had a mean age of 35.07 (S.D. = 8.40) and their mean years of teaching experience was 11.13 (S.D. = 8.31). Other background characteristics of the teachers are shown in Table 2 which shows that approximately 60% of the subjects were classroom teachers who did not hold any positions of responsibility (for example vice-principal, discipline, careers, or student guidance masters/mistresses), and 70.1% were appraised by their subject panel chairpersons. Panel chairpersons and teachers responsible for administrative duties were appraised by the vice-principal or principal.

Insert Table 2 about here

Factor Structure of the OCDQ-RS

The 34 items of the OCDQ-RS were analyzed using principal component analysis. The factor solution showed that there were eight factors with eigenvalues greater than one. However, a scree plot suggested a six factor solution. The eigenvalues were 7.65, 3.63, 2.25, 2.10, 1.58 and 1.36. These six factors accounted for 55% of the variance. Table 3 shows the six-factor solution after varimax rotation and the factors are named *supportive principal behavior*, *directive*

principal behavior, *engaged teacher behavior*, *frustrated teacher behavior*, *intimate teacher behavior* and *engaged teacher behavior with students*. Table 4 shows the items of the factors.

Insert Table 3 about here

Insert Table 4 about here

It is interesting to point out that the factor structure revealed in the present study is very similar to that originally reported by Kottkamp, Mulhern, and Hoy (1987). The items on the factors *supportive principal behavior*, *directive principal behavior* and *intimate teacher behavior* are exactly the same as in the original OCDQ-RS. However, in the present factor analysis, items 1 and 9 which belong to the *frustrated teacher behavior* in the original OCDR-RS have loaded negatively on the *engaged teacher behavior*. For consistency in direction, these two items were reverse scored for calculating the subscale score. Item 3 (Teachers spend time after school with students who have individual problems) loaded on the *frustrated teacher behavior* instead of loading on the *engaged teacher behavior*. This is understandable as teachers in Hong Kong feel that they have too much work to do (Mo, 1991) and their work load is increased if they also have to spend time after school to deal with students' disciplinary problems. Three items describing the relationship between students and teachers came out as a separate factor which was named *engaged teacher behavior with students*. As shown in Table 5, apart from the last factor, the other factors have rather high reliabilities.

School Climate and Effectiveness of Teacher Appraisal

Table 5 shows that the outcomes of appraisal was shown to correlate positively and significantly with supportive principal behavior ($r = .41$, $p < .001$), engaged teacher behavior ($r = .33$, $p < .001$), and negatively and significantly with directive principal behavior ($r = -.30$, p

< .001) and frustrated teacher behavior ($r = -.17$, $p < .01$). The results of the study therefore suggest that teachers are more likely to benefit from their appraisal if their principals are supportive and teachers are engaged, and less likely to benefit from their appraisal if their principals are directive and teachers are frustrated. It can be seen that the four elements of open school climate are related to the effectiveness of appraisal. In schools with an open school climate, principals create a supportive environment, encourage teacher participation and free teachers from routine busywork so that they can concentrate on teaching. Teachers in these schools experience sincere, positive and supportive relationships with administrators and colleagues (Kottkamp, Mulhern, and Hoy, 1987). It can be seen that open schools emphasize task accomplishment as well as good human relationships.

Insert Table 5 about here

It has been pointed out by Mo, Conners, and McCormick (1998) that the ultimate goal of appraisal is the improvement of teachers' performances. During an appraisal, the appraiser observes the teacher's classroom teaching and provides feedback on the problems identified. For suggestions to be accepted by teachers, the appraisers have to seen as helpful and trustworthy. Tarter, Bliss, and Hoy (1989) have found that in a school with an open school climate teachers trust the principal and their colleagues. McLaughlin and Pfeifer (1988) have noted that when teacher appraisal is conducted in a context of mutual trust and support, they can stimulate learning for the individual and encourage self-reflection. Teachers therefore show improvement after being appraised.

In order to access the combined effects of different dimensions of school climate on the effectiveness of appraisal, a stepwise multiple regression was performed and the results are shown in Table 6. Only supportive principal behavior and directive principal behavior are shown to make unique and significant contributions to the variance in the outcomes of appraisal.

Insert Table 6 about here

Results of the multiple regression show that the principal's behaviors are the best predictors for the effectiveness of appraisal. Although most of the teachers are appraised by the panel chairperson, the principal, as the head of the school is required to endorse the appraisal report, give further comments on the performance of the teacher and make use of the appraisal report for managerial decision making. Therefore, if teachers perceive their principals as supportive and not directive, they may have a more favorable attitude towards appraisal. They will then be more eager to take part in staff development activities and improve their teaching.

Conclusion

The results of the study support the importance of an open school climate in which principals are supportive and not directive, and teachers are engaged and not frustrated in determining the effectiveness of appraisal. This study has also found that principals' behaviors are the most important predictors for the effectiveness of appraisal. Although most principals leave instructional supervision to the subject panel chairperson, they still have a key role to play. Supportive principals set an example through hard work and motivate teachers with constructive criticism. They are helpful and concerned with the professional welfare of teachers. These supportive behaviors are likely to create an atmosphere that fosters teachers' professional growth.

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Table 1

Items for the Outcomes of Appraisal

Number	Item
1	Increase in teaching skill
2	Reflect more on teaching
3	Care more about teaching
4	Know the areas that teachers require improvement
5	Provide professional development needs of teachers
6	Understand teaching –learning process better
7	Understand strengths and weaknesses better
8	Consider teaching more like a professional job
9	Help teachers improve teaching effectiveness
10	Know the direction of professional development
11	Gain more reinforcement in teaching

Table 2

Background Characteristics of Subjects

Characteristics	Number	Percentage
Sex		
Male	161	48.5
Female	171	51.5
Academic Qualification		
Tertiary Non-degree	95	28.4
Bachelor	201	60.0
Master	33	9.8
Others	6	1.8
Professional Qualification		
Teachers' training	279	83.3
Nil	56	16.7
Position at School		
Teacher (with no positions of responsibility)	204	60.5
Subject Panel Chairperson	96	28.5
Administration (e.g. Vice-principal, discipline, careers, or guidance master/mistress)	37	11.0
Appraiser		
Teachers		
Panel Chairperson	143	70.1
Vice-Principal	19	9.3
Principal	42	20.6
Panel Chairperson		
Vice-Principal	45	47.4
Principal	50	52.6
Administration		
Panel Chairperson	2	5.6
Vice-Principal	8	22.2
Principal	26	72.2

Note. Total n = 337, missing data deleted listwise.

Table 3
Factor Matrix of Six-Factor Varimax Solution of the OCDQ-RS

Item	I	II	III	IV	V	VI
23	.79038	-.02323	.13563	.00159	.16017	.02044
30	.74408	-.23406	.28020	-.07037	-.01610	.05173
24	.73321	.10628	.08253	-.00465	.21085	-.00875
29	.72932	-.13620	.21595	-.02574	-.03444	.05533
05	.72517	-.05631	.26128	.00742	-.06852	.01067
25	.68334	.01332	.05932	-.09521	-.03071	.07302
06	.66457	-.23370	.30916	-.09336	.05838	.12903
18	.08435	.82806	-.09746	-.01763	-.01857	.02153
13	.08605	.79654	-.07212	.03273	-.07805	-.12879
31	.04978	.79592	-.05599	.01301	-.04051	-.11573
12	-.35767	.67321	-.08851	.25879	.01280	.10044
19	-.43982	.65660	-.13189	.20841	-.04999	.11429
32	-.26442	.65177	-.05139	.13364	.14510	.05808
07	-.13359	.56192	-.10370	.30857	.03870	.10708
28	.34347	-.07377	.67361	-.07078	.07168	.24755
16	.13537	-.06589	.66848	.04690	.22073	-.03904
04	.29800	-.10610	.64160	-.04400	.04010	.18526
01	.03339	-.13396	-.61138	-.07491	-.06144	-.08961
11	.17808	.07804	.58487	-.08791	.14852	.20513
20	.36565	-.00245	.55822	-.19697	.16253	.12323
34	.25479	-.18565	.53134	.10414	-.01418	.01655
09	-.01965	-.33110	-.41859	-.18267	-.06227	-.27132
08	-.11487	.18345	-.09738	.75420	-.06116	.03477
22	-.18600	.18847	.02659	.75097	-.04436	-.01580
02	.13250	.08416	-.11844	.72906	.00431	-.05757
15	-.09880	.15007	.02120	.70035	.00207	.01274
03	.04831	-.10634	-.06013	.38755	.05305	-.27820
26	-.00271	-.13562	-.11261	.10552	.77130	.04790
27	.06806	.01045	.32996	.02580	.69259	-.12294
21	.08711	-.05022	.05679	-.04883	.60378	.42101
14	.04803	.14159	.13349	-.12521	.42671	-.09373
33	-.08542	.02385	.16984	-.03191	-.02070	.63548
10	.21199	-.05037	-.07462	.01780	-.05502	.59943
17	.19611	.04746	.33869	-.22384	.20128	.49522

Cumulative variance explained by six factors: 54.6%
Note. Factor I = Supportive Principal Behaviour;
Factor II = Directive Principal Behaviour;
Factor III = Engaged Teacher Behaviour;
Factor IV = Frustrated Teacher Behaviour;
Factor V = Intimate Teacher Behaviour;
Factor VI = Engaged Teacher Behaviour with Students.

Table 4
Factor Items of the OCDQ-RS

Factor I (Supportive Principal Behaviour):

23 The principal goes out of his/her way to help teachers.
30 The principal looks out for the personal welfare of the faculty.
24 The principal explains his/her reason for criticism to teachers.
29 The principal uses constructive criticism.
5 The principal sets an example by working hard himself/herself.
25 The principal is available after school to help teachers when assistance is needed.
6 The principal compliments teachers.

Factor II (Directive Principal Behaviour):

18 The principal closely checks teacher activities.
13 The principal monitors everything teachers do.
31 The principal supervises teachers closely.
12 The principal rules with an iron fist.
19 The principal is autocratic.
32 The principal talks more than listens.
7 Teacher-principal conferences are dominated by the principal.

Factor III (Engaged Teacher Behaviour):

28 Teachers really enjoy working here.
16 Teachers help and support each other.
4 Teachers are proud of this school.
1* The mannerisms of teachers at this school are annoying.
11 Teachers are friendly with students.
20 The morale of teachers is high.
34 Teachers respect the personal competence of their colleagues.
9* Teachers interrupt other faculty members who are talking in faculty meetings.

Factor IV (Frustrated Teacher Behaviour):

8 Routine duties interfere with the job of teaching.
22 Assigned non-teaching duties are excessive.
2 Teachers have too many committee requirements.
15 Administrative paper work is burdensome at this school.
3 Teachers spend time after school with students who have individual problems.

Factor V (Intimate Teacher Behaviour):

26 Teachers invite other faculty members to visit them at home.
27 Teachers socialize with each other on a regular basis.
21 Teachers know the family background of other faculty members.
14 Teachers' closest friends are other faculty members at this school.

Factor VI (Engaged Teacher Behaviour with Students):

33 Pupils are trusted to work without supervision.
10 Student government has an influence on school policy.
17 Pupils solve their problems through logical reasoning.

Note. *Reverse scoring item.

Table 5
Reliabilities, Means, Standard Deviations and Intercorrelations between Subscales of Instruments

Factor	OUT	S	D	ET	ETS	FT	I	Mean	S.D.
OUT	.94							2.91	0.76
S	.41***	.88						2.21	0.63
D	-.30***	-.28***	.87					1.96	0.65
ET	.33***	.55***	-.31***	.80				2.66	0.47
ETS	.07	.20***	-.02	.31***	.43			1.62	0.48
FT	-.17**	-.13*	.30***	-.19***	-.14**	.74		2.64	0.55
I	.09	.19***	-.04	.29***	.21***	-.08	.55	1.99	0.46

Note. *p < .05, **p < .01, ***p <.001, 1-tailed.
OUT = Outcomes of appraisal; S = Supportive Principal Behavior; D = Directive Principal Behavior;
ET = Engaged Teacher Behavior; ETS = Engaged Teacher Behavior with Students;
FT = Frustrated Teacher Behavior; I = Intimate Teacher Behavior.
Diagonals are alpha coefficients.

Table 6
Stepwise Multiple Regression Analysis for the Relationship between Outcomes of Appraisal and Dimensions of School Climate

Step	Variable	R	R^2	Change in R^2	β	F
1	Supportive principal behavior	.41	.17	.17	.35	58.39***
2	Directive principal behavior	.45	.20	.03	-.20	37.02***

Note. ***p< .001.